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To: Regional Forester

From: Ona A. Harrison, F. S., By Ernest C. Hirsch

Subject: S
CONTROL - Ashley
Insect
(Survey Report C.Y. 1948)

Annual insect infestation report is herewith submitted in accordance with outline indicated on pages 107 and 108 of the T M Handbook.

1.

(a) Location

The areas of infestation have been broken up into natural treating units as follows:

Lodgepole Pine

Ranger District	Unit
5	Gilbert Creek
5	Gourley Meadow
5	Smith Fork
5	Sage Creek
5	Red Mountain
5	Louse Creek
5	Henry Fork
5	Beaver Creek
5	Hoop Lake
5	Burnt Fork
5	Thornburgh Pasture
1	Upper Sheep Creek

Ponderosa Pine

1	Ute Lookout
4	Dry Gulch
4	Yellowstone Canyon
4	Point of Mountain
4	Lake Fork Canyon

(b) Extent of infestation

On D-5, the infestation extend over the entire length of the district between 8,300 and 10,500 feet elevations. Smith Fork, Middle Beaver, and Sage Creek contain the major portion of the infestation. On D-1, the infestation is limited to two areas, the Upper Sheep Creek unit, the Ute Lookout unit. On D-4, the infestation is scattered through the ponderosa pine belt including some lodgepole pine timber within this area.

(c) Description of the area and timber involved:

On D-5, the host type is lodgepole pine. Even-age stands are the rule, with small component stands of varying age classes appearing in each treating unit. A small amount of aspen and sage brush is found at the lower elevations.

On D-1, the host type on the Upper Sheep Creek unit is lodgepole pine; on the Ute Lookout unit it is ponderosa pine.

On D-4, the host type is ponderosa pine. Some lodgepole pine is reported infected in this area.

(d) Terrain

On all districts the topography consists of well defined drainages, separated by low rolling hills at the lower elevations which become steep sided ridges at the heads of the drainages. The drainage channels run in a north-south direction. The Ute Lookout unit consists largely of flat sloping terrain with a few intersecting ridges and drainages.

(e) Acreage: On D-5, the area of infestation covers approximately 49,015. acres.

On D-1, 7,600 acres in the lodgepole pine and 2,480 acres in the ponderosa pine are infested.

On D-4, the infestation is scattered through 12,600 acres of ponderosa pine type.

(f) Degree of isolation

These infestations are adjacent to and directly in line with the heavy infestations on the Wasatch N. F. The infestations on the Wasatch and D-5 may well be considered as one infestation, spreading to the east with prevailing winds.

On D-1 and D-4, the infestations are now of limited extent, but are not isolated by any natural barriers.

(g) Contiguous stands of timber

Contiguous to these infested areas lie extensive stands of lodgepole pine and ponderosa pine timber. In fact, it is only a matter of time before the entire timber stand on the Ashley National Forest will become infested if a check is not made of the eastward advances of the present infestations.

2. Species of timber:

LODGEPOLE PINE AND PONDEROSA PINE

Scattered isolated infestation has been observed in Douglas fir stands on Manila and Vernal districts.

3. Insect Responsible for Damage

Dendroctonus monticolae in lodgepole pine and Dendroctonus ponderosa in ponderosa pine.

4. Status of infestation

On the Manila district, some control work was accomplished in 1942 and 1943. In 1945, the fall survey showed 1,940 ponderosa pine trees infested. There were 943 trees treated in the spring of 1946. The 1946 fall survey showed 488 infested trees. 360 trees were treated in the spring of 1947. The 1947 fall survey indicated that the infestation was in an endemic stage. The 1948 aerial flight map indicated a few red tops in the west end of the Ute Lookout unit. A 2½ percent survey indicates 40 new attacks on this unit. This is .018 trees per acre. Otherwise, no other infestation has been observed on the ponderosa pine belt.

A 2½ percent survey of the infested lodgepole pine area on the Manila district indicates 6,558 new attacks. This is .86 trees per acre. In the area north of Sheep Creek in this unit 1,236 new attacks were discovered on 4,400 acres. This infestation is adjacent to the Fort Bridger epidemic. It is evident that the beetles are moving eastward along the matured lodgepole pine belt with the prevailing west wind.

On D-5, there has been a more or less expanding infestation for many years. The largest control project was in Henry's Fork in 1941; 5,900 trees were treated. No large scale treating project has been conducted since 1941.

On D-4, treating projects were initiated in 1921, and conducted annually until 1935. Since then, projects have been conducted at intervals of several years. The infestation has been held in check and greatly reduced to the present time. A small attack in the lodgepole pine stand on the district in the vicinity of East Basin Creek #2, north of Moon Lake has been reported.

The 1948 insect survey reveals an infestation as follows:

Lodgepole Pine

Ranger District	Area	New Attacks	Acres
1	Upper Sheep Creek Unit	6558	7600
5	Gilbert Creek	1040	1440
5	Gourley Meadow	640	1110
5	Smith Fork	15280	10250
5	Sage Creek	14120	8290
5	Red Mountain	1880	5245
5	Louse Creek	1200	2840
5	Henry Fork	3920	4630
5	Beaver Creek	15440	6230
5	Hoops Lake	6920	2110
5	Burnt Fork	1840	2320
5	Thornburgh Pasture	760	4550
	Totals	69,598	56,615

Ponderosa Pine

Ranger District	Area	New Attacks	Acres
1	Ute Lookout	40	2,160
4	All units	110	12,600

The infestation per acre on D-5 is 1.3 trees per acre. On D-1 it is .018 trees per acre in the ponderosa pine and .86 trees per acre in the lodgepole pine stand.

On D-4, it is estimated at .008 trees per acre.

5. Recommendation for artificial control measures:

With infestations on the Ashley located as they are, between a heavy infestation to the west being advanced eastward by a prevailing west wind, and the entire Ashley timber stand to the east and south vulnerable to the spread of these infestations, control is both feasible and necessary.

The watersheds on the Ashley provide water for irrigation, power and culinary purposes to the numerous small communities adjacent to the forest as well as contributing much water to the Colorado River drainage.

Lumber and mine props from the Ashley are greatly in demand by the various users in Utah, Wyoming and Colorado.

The scenic and esthetic values on the forest provide recreational enjoyment to thousand of visitors and sportsmen every season.

These watersheds, timber, and recreational values would be greatly impaired if the advances of the infestation on the Fort Bridger and Manila districts are not controlled.

Measures to control these infestations should be undertaken as soon as weather conditions will permit in the spring.

6. See map for Districts 1, 4, and 5 with following explanations: (Maps attached).

D-5:

Gilbert, Gourley and Smith Fork can be treated out of one main camp located just south of the State line on the Bridger Lake road. Trucking is possible from this camp to treating areas.

Sage Creek can be treated out of a main camp located at Big Springs. Trucking is possible under favorable conditions. The upper end of the area will need dry weather for truck haul.

Red Mountain can be treated by placing a spike camp on Dahlgren Creek. This camp will have to be moved by wagon; truck haul is possible within two miles of this camp during dry weather. This would be a summer, chemical treating job.

Louse Creek could be handled by truck as a summer chemical job. Camp would be located in the center of the area on an old wagon road.

Henry's Fork could be treated from a main camp located at the upper end of Henry's Fork Park. Truck haul is possible only in dry weather or on frozen ground.

Beaver Creek could be treated from a main camp set up ¼ mile inside the Forest boundary on Middle Beaver road. Spike camps would be set up in Willow Park and West Beaver Creek to handle the more remote areas of West Beaver and Deer Hills respectively.

Hoop Lake area may be treated from a camp located at Hoop Lake.

Burnt Fork may be treated from a camp located at Thornburgh Pasture.

7. Insect survey report is attached.

8. If large control operation is conducted in the infested lodgepole stands, equipment will need to be secured from the Regional Office.

Lodgepole Pine

District 1	6558 infested trees @ $6.00	$ 39,348.00
District 5	63040 infested trees @ $6.00	378,240.00
		$417,588.00

Ponderosa Pine

(Previously treated area)

District 1	40 infested trees @ $7.00 per tree	$280.00
District 4	110 infested trees @ $8.00 per tree	880.00
		$ 1,160.00

The hiring of men would need to be region wide. Local men and equipment are available for the ponderosa pine project on District 1 and District 4.

9. Regional Office assistance in securing supplies, equipment, and men would be desirable.

10. All insect work should preferably start in the early spring.

INSECT SURVEY REPORT - Ashley

November 1948

This report is in accordance with the outline on pages 121 and 122 of the R-4 Timber Management Handbook. It becomes a part of the annual report under Caption #7.

Two insect control surveys were conducted separately on Ranger Districts 1 and 5. This report will deal with each survey separately.

No survey was conducted on District 4, but insect infestation estimate was based upon observations made while the ranger was on other project work in the infested areas.

D-5

The character of the timber: The host type timber is lodgepole pine. Even-aged stands are the rule, with small component stands of varying age classes appearing in each treating unit. A small amount of aspen and sagebrush is found at the lower elevations.

Topography: The terrain consists of well defined drainages separated by low rolling hills at the lower elevations and becoming steep sided ridges at the head of the drainages. The drainage channels run in a north-south direction.

Accessibility: There are few roads on this district. A few poor roads reach the lower edge of the forest. The highness of the elevation gives a short summer season and a storm condition which affects fall, winter and spring work materially.

Character of beetle attacks: There has been a marked increase in the number of new attacks over the 1947 infestation in all treating units. The present infestation appears to be fanning-out of last years (1947) infestation centers. The spread seemed to be gradual with no appreciable jumps. The general spread of the infestation is to the east under the influence of the prevailing winds. There were a great many so-called blind attacks this year, perhaps due to an extremely dry season.

Time of year for control work: The high elevation and lack of roads necessitates the control work be done in the spring and summer months.

History of the epidemic: History of the epidemic extends back twenty years or more. Partial treating has been carried on and the infestation held in check up until about three years ago. The largest single control job was done in 1941 when 5,900 trees were treated.

The survey: The survey was made by Ranger Burton O. Clark, Forester E. C. Hirsch, Forest Guard Burnell Pops and 4 laborers trained on the job to survey and identify bug trees. An airplane reconnaissance was made on September 22, 1948, by 4 Forest Service Officers and pilot. It was decided that much of the same area should be covered as last year. The field work was done between September 9 and October 8, 1948. Dr. Buchanan of the Bureau of Entomology

and Paul Grossenbach, Timber Management R-4 handled the training program and inspected a portion of the area at Hoop Lake. Training was accomplished on the 9th and 10th of September.

A 2½% cruise was made of the area. The ¼ acre sample plot method was used. Two strips per mile with plots every 2½ chains along the strip were taken. The strips were generally run east and west across ridges and stream channels. Control stations were set along roads using section lines to tie to (the same stations as were used in the 1947 survey). Stations in between were set by pacing or by use of auto speedometer.

The approximate cost of the survey is as follows:

Forest Guard	19 days	$ 182.40	
Laborers	26	203.20	
Forester	8		$ 85.00
P. O. auto mileage		12.75	
Ranger salary	15		215.10
Airplane hire		40.00	
Pilot			15.00
Per diem, Ranger & Forester		40.00	
		$478.35	$315.00

Total - - - - - - - - - - - - $793.35

Map: A 1 inch per mile map is used in order to show the necessary detail of heavy infestation.

Summary Data
(2½% cruise, use 40 for strip multiplier)

Strip No.	Date	Run By	Total ch. On Strip	N.A. on strip	Total N.A.	Remarks
2	9/28	CB	360	82	3280	Gourley & Sage Cr.
3	9/24	BP	352	42	1680	Gourley, Sage Cr. & Smith Fk.
4	9/23	ECH	284	71	2840	Smith Fk.
5	9/21	JKH	457	0	0	Smith Fk.
6	9/22	ECH	463	20	800	Smith Fk. & Red Mountain
7	9/22	BP	380	6	240	Red Mountain
8	9/21	BP	448	10	400	Smith Fk.
9	9/23	BP	473	19	760	Smith Fk. & Red Mountain
10	9/21	ECH	431	5	200	Smith Fk.
11	9/24	BOC	330	41	1640	Smith Fk.
11A	9/27	BP	230	2	80	Smith Fk.
12	9/22	JKH	408	24	960	Smith Fk.
13	9/30	TP	140	37	1480	Sage Cr.
14	9/23	JKH	375	147	5880	Smith Fk.
15	9/28	BP	400	63	2520	Smith Fk.
16	9/28	TP	312	36	1440	Gilbert Cr.
17						Not run
18	9/30	ECH	427	75	3000	Sage Cr. & Louse Cr.
19	9/30	CB	323	138	5520	Sage Cr. (prev. reported 6640 NA)
20	9/29	ECH	415	36	1440	Sage Cr. & Louse Cr.

D-5 Summary Data (Continued)

Strip No.	Date	Run By	Total ch. on strip	N.A. on strip	Total N.A.	Remarks
21	9/29	CB	217	3	120	Louse Cr.
22	9/29	TP	135	8	320	Louse Cr.
23	9/29	BP	400	13	520	Red Mountain
24	10/8	BP	220	0	0	Henry Fk.
25	10/1	TP	226	0	0	Henry Fk.
26	10/1	ECH	452	23	920	Henry Fk.
27	9/17	RT	336	13	520	Henry Fk.
28	9/17	BOC	325	41	1640	Henry Fk.
29	9/17	BP	407	9	360	Henry Fk.
30	9/17	JKH	425	0	0	Henry Fk.
31	9/15	BP	482	193	7720	Beaver Cr.
32	9/15	JKH	495	175	7000	Beaver Cr.
33	9/10	BOC	88	42	1680	Hoop Lake (training)
34	9/14	BOC	158	131	5240	Hoop Lake (training)
35	9/16	JKH RT	562	46	1840	Burnt Fork
36	9/30	BP	120	15	600	Beaver Cr. (Deer Hills)
37	9/15	RT	390	3	120	Beaver Cr.
38	9/15	BOC	210	0	0	Beaver Cr.
39	10/7	BP	420	9	360	Henry Fk.
40	10/1	CB	388	2	80	Henry Fk.
41	9/24	ECH	640	12	480	Thornburgh
42	9/24	JKH	551	7	280	Thornburgh

Summary by Treating Units

Unit	Acres	N.A. on strip	Total N.A. for unit	N.A. per acre
Gilbert Cr.	1,440	26	1,040	.72
Gourley Meadow	1,110	16	640	.58
Smith Fork	10,250	385	15,280	1.50
Sage Cr.	8,290	353	14,120	1.70
Red Mountain	5,245	47	1,880	.36
Louse Cr.	2,840	30	1,200	.42
Henry Fork	4,630	98	3,920	.85
Beaver Cr.	6,230	386	15,440	2.48
Hoop Lake	2,110	173	6,920	3.28
Burnt Fork	2,320	46	1,840	.79
Thornburgh Pasture	4,550	19	760	.17
Totals	49,015	1,579	63,040	1.286

Above is based on 2½% cruise. Use 40 for strip multiplier.

D-1

The character of the timber: The ponderosa pine timber consists of all age classes and sizes. Some timber has been cut over. The timber is open to park like and has a sparse undercover. The bulk of the stand is pure ponderosa pine. However, it becomes mixed with lodgepole and aspen on the outer edges.

The lodgepole timber affected is mature and stagnated overmature stands. The infestation extends along the matured lodgepole belt from the Birch Creek road to the Vernal-Manila Highway.

Topography: The topography consists of well defined drainages separated by low rolling hills at lower elevations and becoming steep sided as it nears the head and mouth of the drainages. Logging roads over most of the Sheep Creek Unit makes it accessible to jeeps and trucks.

Character of beetle attacks: Attacks are heavy, with little evidence of pitch tubes, making detection impossible without close observation. In general, the infestation is along the matured lodgepole pine belt from Birch Creek to Mahogany Draw on the North side of Sheep Creek.

Time of year for control work: This timber can be treated in the fall or spring. Spring treating is recommended in that the roads are open and the area more accessible.

History of the epidemic: Ponderosa Pine - In the Spring of 1939, some 200 trees were treated in Cart Creek area. The Green Lakes area was treated by C. C. C. labor during that era. Some hot spot treating was done over the entire area in 1942 and 1943. In the Spring of 1946, 943 trees were treated. In 1947, some 360 trees were treated. The fall survey in 1947 indicated that the infestation was in an endemic stage. The 1948 fall survey, shows 40 infested trees along the west end of Ute Lookout unit.

Lodgepole - Little or no treating has been done in the lodgepole for the last 15 years. The current out break is due to migration of the beetles from the Fort Bridger District along the matured lodgepole pine belt with the prevailing west wind.

Method of survey: A 2½% survey, using ¼ acre plots, was used. Youngs Spring and Carter Creek were scouted with saddle horse. These areas are considered to be in an endemic stage.

Personnel: The personnel used on the cruise were trained at the Hole-in-Rock Insect Training School. Timothy Potter, Everett Potter, and K. D. Roberts made up the crew.

Inclusive Dates of Survey: Field work was accomplished between September 14 and October 11, 1948.

D-1 Summary Data

Sheep Creek Unit

Timbered area to which strip applies, 7,600 acres
2½% cruise, ¼ acre plots.

Date 1948	Strip Number	Total No. Plots	Total Acres of Plots	N. A. On strip
South of Sheep Creek				
9/14	1	128	32	10
9/15	2	86	21.50	17
9/16	3	106	26.50	1
		320	80	28

Number of acres - 3200
N. A. per acre .35
Estimated N.A. 1120

North of Sheep Creek				
9/19	4	104	26	26
9/22	5	69	17.25	45
9/23	6	90	22.50	27
9/24	7	89	22.25	0
9/27	8	88	22	28
		440	110.00	126

Number of acres - 4400
N. A. per acres 1.236
Estimates No. A. - 5,438

Number of acres in Sheep Cr. Unit -- 7,600
Estimated N. A. - 6,558

Ashley D-1, Ute Lookout Unit

Timbered area to which strip applies, 2-480
2½% cruise, ¼ acre plots.

10/12	9	160	40	0
10/13	10	88	22	1
		248	62	1

Number of acres - 2,480
N. A. per acre - .0161
Estimated N. A. 40

Sheep Cr. Unit - 7,600 Acres -- 6558 infected trees
Ute L. O. Unit - 2,480 Acres -- 40 infected trees.

10,080 6598

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
LYLE F. WATTS, CHIEF
ANTHONY P. DEAN, CHIEF, DIVISION OF ENGINEERING

ASHLEY NATIONAL FOREST
UTAH AND WYOMING
SALT LAKE, UINTA SPECIAL AND SIXTH PRINCIPAL MERIDIANS

1948

SCALE

LEGEND

- NATIONAL FOREST BOUNDARY
- ADJACENT NATIONAL FOREST BOUNDARY
- WILDERNESS AREA BOUNDARY
- MAIN MOTOR HIGHWAY
- GOOD MOTOR ROAD
- POOR MOTOR ROAD
- TRAIL
- RAILROAD
- TELEPHONE LINE
- SUPERVISOR'S HEADQUARTERS
- DISTRICT RANGER STATION
- GUARD OR RANGER STATION NOT PERMANENTLY OCCUPIED
- TRIANGULATION STATION
- FOREST SERVICE MONUMENT
- PERMANENT LOOKOUT STATION
- INTERMEDIATE LANDING FIELD
- HOUSE, CABIN OR OTHER BUILDING
- NATIONAL FOREST LAND

REPORT ALL FIRES TO FOREST SUPERVISOR, RANGER, GUARD, SHERIFF OR ANY TELEPHONE OPERATOR.

LEGEND

Unit No.	Area	New Attacks	Acres
1.	Gilbert Creek	1040	1440
2.	Gourley Meadow	640	1110
3.	Smith Fork	15280	10250
4.	Sage Creek	14120	8290
5.	Red Mountain	1880	5245
6.	Louse Creek	1200	2840
7.	Henry Fork	3920	4630
8.	Beaver Creek	15440	6230
9.	Hoops Lake	6920	2110
10.	Burnt Fork	1840	2320
11.	Thornburgh Pasture	760	4550
12.	Upper Sheep Cr. Unit	6558	7600

LEGEND

Treating Unit Boundary

Lodgepole Pine Infested Area

Ponderosa Pine Infested Area

40 N.A. New attacks

Prepared By

E. C. Hirsch
Nov. 12, 1948

COMPILED AT REGIONAL OFFICE, 1948, R.7W.
FROM U.S.G.S. BUREAU OF LAND MANAGEMENT (FORMERLY G.L.O.) FOREST SERVICE AND OTHER SURVEYS BY CALVIN SPAUN.
TRACED 1948 BY CALVIN SPAUN.

CAUTION: THE ACCURACY OF THIS MAP IS UNKNOWN, SINCE COMPILED FROM SOURCES OF UNKNOWN ACCURACY.

POLYCONIC PROJECTION
1927 NORTH AMERICAN DATUM

LONGITUDE WEST FROM GREENWICH